AMSAT News Service Weekly Bulletins
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From: DCOWDIN
To: IS
CC: W1AW
Subj: $ANS-224

SB ALL @ AMSAT $ANS-224.01
AO-13 MODE S BEACON FIXED

HR AMSAT NEWS SERVICE BULLETIN 224.01 FROM AMSAT HQ
SILVER SPRING, MD AUGUST 12, 1989
TO ALL RADIO AMATEURS BT

AO-13 Mode S Beacon Can Now Be Commanded Off During Normal Mode S Operations

AMSAT ground-command station operator Peter Guelzow (DB2OS) reported this week that with the help of DF5DP and ON6UG he was able to make a major break through in improving the performance of the Mode S transponder aboard AO-13. One of the original problems which plagued Mode S users was the fact that the Mode S beacon would not shut off as it was designed to do so during normal transponder operations. Consequently, it was necessary to use exorbitant amounts of power on 70cm to put a bring a copyable signal down in the 2400 MHz passband. In short, Mode S users had to "compete" with the beacon for RF output power. Among the many "eyeball" QSOs that Peter had at DATASPACE '89 at the University of Surrey two weeks ago, G2BFO and ON6UG make it known to Peter the curious behaviour they had noticed recently everytime the Mode S transponder was automatically switched on. They observed that there seemed to be a slight delay sometimes when the transponder came on -- sometimes the transponder would switch on, then the beacon would turn off, and then the beacon would come back on a moment later and visa-versa. So after returning from DATASPACE '89, Peter decided to investigate this report further. With the help of DF5DP and ON6UG providing him with instantaneous feedback using terrestrial packet links, Peter then sent several combinations of commands to AO-13 and was able to "manually" command the Mode S beacon off during normal Mode S transponder operation. This was the first time this had ever happened and with the beacon turned off, signal reports were excellent. Moreover, Peter says that he can now change the software to make this process happen automatically. At this time it is not possible to say with any certainty how much power it will take on 70cm to get into Mode S transponder with the beacon off; but the "best" guess is that it will require less power. After next week's busy transponder schedule change and attitude re-adjustment on AO-13, Peter will begin work on changing the ground-command software. Peter adds that he feels that something must have "changed" in the hardware since he first did tests a year ago on the Mode S transponder. Look for further updates on this important bulletin next week from the AMSAT News Service (ANS).

/EX
SB ALL @ AMSAT $ANS-224.02
AO-13 TRANSPONDER SCHED CHANGE

HR AMSAT NEWS SERVICE BULLETIN 224.02 FROM AMSAT HQ
SILVER SPRING, MD AUGUST 12, 1989
TO ALL RADIO AMATEURS BT

AO-13 Transponder Schedule Change Planned For August 16, 1989

According to VK5AGR, AMSAT ground-command station, there will be a AO-13

transponder schedule change effective August 16, 1989. This change in schedule marks the end of "full-time" transponder operation. AO-13 will now start to encounter solar eclipse periods lasting from 3 minutes to 27 minutes between MA 247 through perigee to MA 001. This means that the all transponder operations will have to cease during this perigee time. Also, AO-13 will be making an attitude re-adjustment from the current Bahn coordinates of BLONG=180/BLAT=0 to BLONG=210/BLAT=0. The actual start of the this attitude maneuver will be on August 14th. All users should take note that magnetorquing will occur during the perigee passes of Orbits 893/894/895/896 from MA 224 to MA 31. Further magnetorquing may be required to "fine-tune" the attitude and if this is necessary, it will be done during August 16-20th. AO-13 users who have the G3RUH PSK 400 baud demodulator are encouraged to observe the telemetry on AO-13 during these eclipse periods. Particularly interesting are spacecraft temperatures during eclipse. Telemetry "watchers" will be suprised at how rapidly the temperatures drop. The following is the schedule for AO-13 until November 16th:

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        AO-13 Transponder Schedule
          16Aug89 until 16Nov89
             BLON/BLAT 210/0

        Mode B:  MA 003 to MA 160
        Mode JL: MA 160 to MA 200
        Mode B:  MA 200 to MA 240
        Off:     MA 240 to MA 003
        Mode S:  MA 210 to MA 222
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/EX
SB ALL @ AMSAT $ANS-224.03
AMSAT SHORT BURSTS

HR AMSAT NEWS SERVICE BULLETIN 224.03 FROM AMSAT HQ
SILVER SPRING, MD AUGUST 12, 1989
TO ALL RADIO AMATEURS BT

AMSAT Short Bursts

Through the efforts of Sumio Nakane (JH3BJN), AMSAT-NA has received the following operating schedule for FUJI-OSCAR-12 for the next few months:

DATE	MODE	OPERATING PERIOD
08/16/89	JA	02:40 UTC until 10:52 UTC
08/19/89	JA	02:00 UTC until 10:12 UTC
08/25/89	JD	00:39 UTC until 08:51 UTC
08/27/89	JD	00:53 UTC until 09:04 UTC
09/02/89	JA	22:37 UTC until 06:49 UTC on 09/03/89
09/05/89	JA	21:57 UTC until 06:00 UTC on 09/06/89
09/08/89	JD	19:15 UTC until 03:27 UTC on 09/09/89
09/13/89	JA	18:48 UTC until 03:00 UTC on 09/14/89
		PLEASE NOTE: NO FO-12 OPERATION FROM SEPT. 15TH TO SEPT. 25TH DUE TO SOLAR ECLIPSES!
09/26/89	JA	15:12 UTC until 23:24 UTC
09/30/89	JD	21:50 UTC until 12:44 UTC on 10/01/89
10/06/89	JD	20:29 UTC until 11:23 UTC on 10/07/89
10/10/89	JA	10:42 UTC until 18:54 UTC

There is a AMSAT 17M Net which is convened every Sunday evening beginning at 23:00 UTC on a frequency of 18.155 MHz. Acting as Net Control Stations (NCS) are KO5I and N4QQ. This net provides another opportunity for those who cannot listen to the AMSAT nets on Sunday afternoon to still find out what is happening in the world of amateur radio satellites. So join KO5I and N4QQ on Sunday

evenings for this new AMSAT HF net.

de DB2OS 01May89: *** AO-10 TRANSPONDER SCHEDULE ***
14Jul89 to 01Sep89

Mode-B : from MA 000 to MA 255

AMSAT-NA is soliciting papers for presentation at and/or publication in the proceedings of its 1989 Space Symposium. Areas of interest include research, development, engineering, funding, construction, management and operation of OSCAR (Orbiting Satellite Carrying Amateur Radio) communications and scientific spacecraft and associated communications networks. Submissions or questions should be forwarded to: Ralph Wallio, W0RPK, CITS Chairman-AMSAT'89, 1250 Highway G24, Indianola, IA 50125. Or you can reach Ralph at the following "land-line" numbers: Home:(515) 961-6406 or Office: (515) 224-8034. On packet-radio you can send him messages via packet BBS W0AK. Also, if you would like to receive a "information" packet about the AMSAT-NA Space Symposium to be held on November 3-6th of this year in Des Moines, IA, please send Ralph a s.a.s.e. with one unit of postage.

WB6LLO suggest that those wishing to experiment with packet on AO-13 should look for him using PSK on the following frequencies:

Mode B-145.870 down, approx. 435.530 up

Mode J-435.950 down, approx. 144.460 up

WB6LLO mentions that if you are having difficulty "connecting" with him that you can meet him up 10 KHz for a voice contact, that is, on Mode B at 145.880 MHz or on Mode J at 435.960 MHz

/EX